

The link partners X and Y using this scheme for negotiation is described below:

Node X sends the link code word with selector/PID set to 00000, ack=0, series end bit=0, and a four bit binary encoded value of the number of protocols supported (to node Y).

If Node Y is not multiprotocol capable, then it will keep sending the link code word with the only PID it supports or can handle. On sensing this, Node X will identify that Node Y is not multiprotocol capable and will advertise with the same PID as node Y, if X can handle that particular protocol. If there are common technology abilities between Node X and Node Y, then a link will be established. If Node X is not capable of the protocol advertised by Node Y, then a link cannot be established.

If Node Y is multiprotocol capable, then it also responds with PID=00000, the number of protocols it can support, and other information about itself through the link code word. As specified in the earlier portion of this description, the ack bit is set on the reception of 4-6 consecutive and consistent link code words. Both nodes begin to transmit their capabilities starting with the lowest PID value they support until all of the protocol capabilities, along with the technology ability bits, are transmitted. It is possible that one of the nodes with fewer protocol abilities can finish its transmission ahead of its link partner. In such a case, it will begin transmitting PID=00000 with the series end bit set to a "1". The node that is lagging will soon catch up and will also begin transmitting PID=00000 and series end bit=1. Since both modes have advertised the end of transmission, this signifies the end of the capability exchange between the two nodes. (If all the protocol information received matches the binary encoded number of protocols identified in the first code word transmission, then there is no loss of information. Otherwise, the transmission will begin again.) From the beginning to the end of this negotiation with PID=00000, NWay will not configure to the highest common denominator in any protocol. That is, it will be in a partial freeze state.

Now that all of the protocol abilities are known, the media access units (MAU's) in both the nodes will look up a common prioritization table to identify the highest common denominator common to both nodes.

B

34